Lockheed Martin Idaho Technologies Company

INTERDEPARTMENTAL COMMUNICATION

Date:

August 26, 1999

To:

D. J. Kuhns

MS 3920

6-8226

From:

T. E. Sivill

MS 3655

6-9273

Subject:

WAG 1 OU 1-10 INSTITUTIONAL CONTROL SITES COST ESTIMATE -

TES-07-99

Cost Estimating has provided a Planning Cost Estimate for the project referenced above. Costs are summarized in a similar format to the RI/FS estimate for comparison purposes.

Costs are based on information and guidance provided by program personnel. The attached recapitulation sheet outlines the general scope and assumptions for the estimate referenced above. Costs have been presented in FY 99 dollars, escalated dollars and discounted to reflect a net present value for comparison purposes.

Should you have any questions, please contact Terry Sivill, ID-TES or 526-9273.

TES

Attachments -

cc: C. L. Reese, MS 3130

T. E. Sivill File

Estimate File 6950-5

Kol

Lockheed Martin Idaho Technologies Company

COST ESTIMATE SUPPORT DATA RECAPITULATION

Project Title: WAG 1 OU1-10 INSTITUTIONAL CONTROL SITES

DRAFT ROD ESTIMATE

Estimator: Date: TES/KLS 8-25-99

Estimate Type: PLANNING

File:

6950-54

Approved By:

Sol

I. SCOPE OF WORK: Brief description of the proposed project.

Prepare a Rough Order of Magnitude Planning Cost Estimate for the above mentioned project. The estimate focuses on TAN WAG 1 – Institutional Control Sites. This estimate provides added and cost to the RI/FS Cost Estimate, dated 9/8/97. New scoping requirements were provided to cost estimating the week of 8-20-99.

The new sites include:

TSF05/TSF-23......Maintenance and inspection only
TSF-06, Area 1......New signs, fencing, maintenance and monitoring
TSF-06, Area 5......New signs, fencing, maintenance and monitoring

TSF-06, Area 11........ New signs, fencing, maintenance and monitoring TSF-10...... New signs, fencing, maintenance and monitoring

TSF-28...... New signs, fencing, sampling, maintenance and monitoring

TSF-29...... New signs, fencing, maintenance and monitoring

WRRTF-05...... New signs, fencing, sampling, maintenance and monitoring

II. BASIS OF THE ESTIMATE: Drawings, Design Report, Engineers Notes and/or other documentation upon which the estimate is originated.

The WAG 1 OU1-10 RI/FS REMEDIAL ALTERNATIVES Cost Estimate, dated 9-8-97.

Scoping and assumptions outline provided by the ER project engineer.

Coordination meeting with WAG 1 program management team.

III. <u>ASSUMPTIONS</u>: Conditions statements accepted or supposed true without proof of demonstration. An assumption has a direct impact on total estimated cost.

Program Management involvement is targeted for a one to two year duration. Costs have been included for one year full-time effort.

All documentation costs have been excluded. It is assumed all documentation and plans developed for the WAG 1-10 will define any requirements for the Institutional Control sites.

COST ESTIMATE SUPPORT DATA RECAPITULATION

Continued –

Project Title:

WAG 1 OU1-10 INSTITUTIONAL CONTROL SITES

DRAFT ROD ESTIMATE

File:

6950-5

Page 2

Remedial Action activities assume a one year duration for installation of all fencing and signage installation.

All post hole excavation will be done in non-contaminated soils.

It is assumed no site drainage or site preparation is required at any of the sites.

Fencing shall be constructed with metal posts and (3) wire strands to a height of 5'-0" above grade with signs posted approximately 100 linear feet. One vehicle access gate has been included per site.

Remedial Action – Operations are assumed a duration for a 100 year period. Activities include Program Management, 5 Yr. Reviews, Continued New Construction Caretaker/Maintenance and Surveillance and Monitoring.

Site TSF-28 assumes initial sampling during remedial action. An allowance of 33 soil samples with analysis for gross alpha/beta analysis has been included. Site WRRTF-05 assumes initial analysis of a single well. An allowance of 6 samples have been included for radiological and organic analysis.

No sampling and analysis requirements or cost have been included for out-year surveillance and monitoring..

IV. <u>CONTINGENCY GUIDELINE IMPLEMENTATION</u>: The percentage used for contingency as determined by the contingency allowance guidelines can be altered to reflect the type of construction and conditions that may impact the total estimated cost.

Contingency has been included at 30% remaining consistent with the existing RI/FS estimates being used for the Record of Decision.

V. OTHER COMMENTS/CONCERNS SPECIFIC TO THE ESTIMATE

The estimate has been prepared with less than 5% scope definition.

Lockheed i	Martin Idaho Technologies Co.	SUMMARY COST ESTIN	MATE SHEET			
Rev 10) -96					
Page 1	of 1					
Project	WAG-1 OU 1-10 IC SHOO DRAFT ROD COST ESTIMATE		Type of Est.	Planning	Date	08/26/99
	INSTITUTIONAL CONTROL (IC) SITES	<u> </u>			Prep'd By	TES/KLS
i_ocation	TAN - INEEL	_ 	File No.	6950-5	Checked By	150
Requests	or D. J. KUHNS				-	
ACCT.		INSTITUTIONAL CONTROLS				
NO.	DESCRIPTION	(IC)				
	CAPITAL COST SUBTOTAL	347,579				
	Contingency @ 30%	104,274				
	TOTAL CAPITAL COST IN CURRENT YEAR DOLLARS	451,853				
	TOTAL CAPITAL COST IN ESCALATED DOLLARS	479,441				
	TOTAL CAPITAL COST IN NET PRESENT VALUE	427,885				
	OLM COST SUBTOTAL	1,479,000				
	Contingency @ 30%	443,700				
<u> </u>	TOTAL O&M COST IN CURRENT YEAR DOLLARS	1,922,700				
	TOTAL O&M COST IN ESCALATED DOLLARS	12,175,077				
	TOTAL O&M COST IN NET PRESENT VALUE	757,243			-	
	TOTAL PROJECT COST IN CURRENT YEAR DOLLARS	2,374,553	-			
	TOTAL PROJECT COST IN ESCALATED DOLLARS	12,854,518				
L	TOTAL PROJECT COST IN NET PRESENT VALUE	1,185,128				

Lockheed Martin Idaho Technologies Co.

D. J. KUHNS

SUMMARY OF DETAILED COST ESTIMATE

Rev	10-96
-----	-------

Requester

ans.	1 ∩f	

Project	WAG-1 OU 1-10 IC Sites DRAFT ROD COST ESTIMATE	Type of Est,	Planning	File No. 6950-5	08/26/99
	INSTITUTIONAL CONTROL (IC) SITES				TES/KLS
Location	TAN - INEEL				

ACCT.		INSTITUTIONAL CONTROLS	
NO.	DESCRIPTION	(IC)	
	DESCRIPTION	(10)	
ER1220	FFA/CO Management and Oversight		
	Program Management	125,000	
	RA Document Preparation		
	RD/RA SOW	NA	
	RA Workplan	NA	
	Packaging, Shipping, Trans. Documentation	NA NA	
	Remedial Action Report	NA NA	
	WAG-Wide RA - 5 Yr. Reviews	NA NA	
	RD Documentation Preparation		
	Safety Analysis Documentation (ASA & HSP)	NA NA	1.7
	Sampling and Analysis Plan	NA NA	
	Pre-Final Inspection Report	NA.	
ER1210	Remedial Design		
	Added Institutional Controls - Deed Restrictions	32,000	
	Title Design Construction Document Package	58,300	,
ER1230	Remedial Action - Construction Subcontract		
	Site Characterization	r 17,150	
	Construction Subcontract	94,323	
	Project/Construction Management	20,807	
	TOTAL CAPITAL COST	347,579	
ER1230	Remedial Action - Operations (100 Year Duration)		
	Program Management	846,000	
	5 Yr. Review For 100 Years	180,000	
	Added Institutional Controls - 5 Yr. Review For 100 Years	NA NA	
	Continued/New Construction Caretaker/Maintenance	453,000	
	Operations, Maintenance, Materials, and Disposal	NA NA	
ER2000	D&D of Facilities	NA NA	- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10
ER1310	Surveillance and Monitoring	NA NA	
	TOTAL OPERATIONS COST (100 YEARS)	1,479,000	

DETAILED COST ESTIMATE

Lockheed Martin Idaho Technologies Co.

D. J. KUHNS

		.020	, commonograpa	٠.
Page	2 of	7		

Project

WAG-1 OU 1-10 IC Sites DRAFT ROD COST ESTIMATE

INSTITUTIONAL CONTROL (IC) SITES
TAN - INEEL

Type of Est PLANNING

File No. 6950-5

Date

08/26/99

ACCT.	DESCRIPTION	E,V,	MATL	MAT'L UT.	UNIT LAB.	TOTAL	LABOR	LABOR	MAT'L	OTHER	TOTAL
NO.		P,H	UNIT	COST	HRS	LAB. HRS.	RATE	COST	COST	cost	COST
	FFA/CO Management and Oversight				*		-				
·	Program Management										
	Coordination/Oversight of Technical Support		1 fte		640	640	75	48,000			48,000
	Coordination with Agency Participants		1 fte		320	320	75	24,000			24,000
	Cost and Schedule Control		1 fte		320	320	65	20,800			20,800
	Ensure Compliance of Gov't Regulation		1 fte		160	160	70	11,200			11,200
	Quarterly and Yearly Reviews		1 fte		160	160	65	10,400			10,400
	Audit Preparation and Coordination		1 fle		160	160	65	10,400			10,400
	Total Cost (Per Year)										124,800
·	Total Cost (Per Year Rounded)			İ							125,000
	Program Management - 1 Year Duration		1 yr	125,000					125,000		125,000
				1.							
	RA Document Preparation	Documentation/Plans are Assumed Covered Under The WAG-1-10 TAN Site Wide Documentation									
	RD/RA SOW								•		-
	PreDesign Studies/Preliminary Scopling										
	Design Criteria										
	RD/RA Document Preparation										
	Reviews and Comment Resolution					<u>-</u> -				· ·	
	RD/RA SOW Cost										NA
	RA Workplan	Docume	entation/Plans are	Assumed Cove	red Under The	WAG-1-10 TA	N Site Wide D	ocumentation			
	Prefirminary Scoping			T							
	RD/RA Document Preparation										
	Reviews and Comment Resolution							-	-		
	RA Workplan Cost										NA
				1				-		 	

Lockheed Martin Idaho Technologies Co.

200,0000			, annumon Suda	Ψ.
Page	3 of	7		

•	
Project	

 WAG-1 OU 1-10 IC Sites DRAFT ROD COST ESTIMATE

 INSTITUTIONAL CONTROL (IC) SITES
 Type of Est.
 PLANNING
 File No.
 6950-5
 Date
 08/26/99

 TAN - INEEL

ACCT.	DESCRIPTION	E,V,	MATL	MAT'L UT.	UNIT LAB.	TOTAL	LABOR	LABOR	MATL	OTHER	TOTAL	
NO.		P,H	UNIT	COST	HRS	LAB. HRS.	RATE	COST	COST	COST	COST	
	RA Document Preparation (cont)			<u> </u>	l	<u> </u>	<u> </u>		<u> </u>			
	Packaging, Shipping, Transportation Plans	Documentation/Plans are Assumed Covered Under The WAG-1-10 TAN Site Wide Documentation										
	Sampling and Analysis	<u> </u>		<u> </u>							· · · · · · · · · · · · · · · · · · ·	
	Hazard Classification											
	Selection and Procurement of Packaging											
	Packaging, Shipping, Transportation Documentation Cost	Ì									NA	
	Remedial Action Report	Docum	Documentation/Plans are Assumed Covered Under The WAG-1-10 TAN Site Wide Documentation									
	RA Report Preparation											
	Reviews and Comment Resolution											
•	RA Report Cost										NA	
		1										
	WAG-Wide RA 5 Yr, Review - (Cost Includes (1) FTE For (1) yr for the initial Review											
	RA Report Preparation										•	
	Reviews and Comment Resolution											
	WAG-Wide RA 5 Yr. Reviews For 100 Years	Documentation/Plans are Assumed Covered Under The WAG-1-10 TAN Site Wide Documentation									NA	
	RD Document Preparation											
	Safety Analysis Documentation (ASA & HSP)	Docur	nentation/Plans are	Assumed Cov	ered Under The	WAG-1-10 T/	AN Site Wide	Documentation	I			
	Auditable Safety Analysis/Hazards Classification											
	Unresolved Safety Questions											
	Quality Assurance		1					<u> </u>				
	Reviews and Comment Resolution					j						
	Safety Analysis Documentation Cost	1									NA	
		1								1		
	Sampling and Analysis Plan	Docur	nentation/Plans are	Assumed Cov	ered Under The	WAG-1-10 T/	AN Site Wide	Documentation	·			
	Preliminary Scoping	T										
	Field Sampling Plan Preparation											
	Reviews and Comment Resolution	1						<u> </u>				
	Sampling and Analysis Plan Cost					1	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		NA NA	

Lockheed Martin Idaho Technologies Co.

Page 4 of 7

Project

WAG-1 OU 1-10 IC Sites DRAFT ROD COST ESTIMATE

INSTITUTIONAL CONTROL (IC) SITES

Type of Est. PLANNING

File No. 6950-5

Date 08/26/99

TAN - INEEL

ACCT.	DESCRIPTION	E,V,	MATL	MAT'L UT.	UNIT LAB.	TOTAL	LABOR	LABOR	MATL	OTHER	TOTAL
NO.		P,H	UNIT	COST	HRS	LAB. HRS.	RATE	COST	COST	COST	COST
	RD Document Preparation (continued)										
	Pre-Final Inspection Report	1									
	Checklist Preparation										
	Reviews and Comment Resolution										
	Pre-Final Inspection Report Cost										NA
			<u></u>]							
	Remedial Design										
	Initial Review of Deed Restrictions with Governing Bodies and	Public C	omment								
	Legal Attorney and Env. Affairs at \$32K ea.		1 ea	32,000					32,000		32,000
	Deed Restrictions Cost										32,000
		_]									
· · · · · · · · · · · · · · · · · · ·	Title Design Construction Document Package - For Construction Subcontract										•
	Remediai Design Workplan		1 fte		40	40	75	3,000			3,000
	Siting and Surveying	_	7 site		10	70	40	2,800			2,800
	Procurement Document Package (3 Dwgs per Site)		21 dwgs	2,500					52,500		52,500
	Total Title Design Package										58,300
	·										
· ·· · · · · · · · · · · · · · · · ·											
	Site Characterization - including: Sample Collection Materials/	Labor, S	hipping, SMO TO	S Preparation 8	Analysis Rep	orting, ERIS (Quality Repor	ting		(Materials)	
	Site TSF-28 - Soil Rad Sample/Analysis		33 ев	100	1	66	75		3,300	2,500	10,750
	Site WRRTF-05 - Rad /Organics Well Sample/Analysis		6 ea	500	2	12	75	900	3,000	2,500	6,400
	Total Site Characterization Cost										17,150
									· · · · · · · · · · · · · · · · · · ·		
										1	
										 -	•

Lockheed Martin Idaho Technologies Co.

Page 5 of 7

Project

WAG-1 OU 1-10 IC Sites DRAFT ROD COST ESTIMATE

INSTITUTIONAL CONTROL (IC) SITES

TAN - INEEL

Type of Est. PLANNING

File No. 6950-5

Date

08/26/99

ACCT.	DESCRIPTION	E,V,	MATL	MATL UT.	UNIT LAB,	TOTAL	LABOR	LABOR	MATL	OTHER	TOTAL
NO.		P,H	UNIT	COST	HRS	LAB. HRS.	RATE	COST	COST	COST	COST
	Remedial Action - Fencing/Signage For Sites: TSF-06 Area 1, TSF-06 Area 5, TSF-06 Area 11, TSF-10, TSF-28, TSF-29, & WRRTF-05										
	Site TSF06 Area 1										
	Mobilization /Demobilization On/Off Site		1 crew		20	20	150	3,000			3.000
	Fencing (3-Strand Metal Post)		2,000 if	10					20,000		20,000
	Signage (100ft spacing)		20 ea	100	0.5	10	150	1,500	2,000		3,500
	Site TSF06 Area 5										
	Fencing (3-Strand Metal Post)		320 H	10					3,200		3,200
	Signage (100ft spacing)		4 ea	100	0,5	2	150	300	400		700
	Site TSF06 Area 11						· · · · · · · · · · · · · · · · · · ·				
	Fencing (3-Strand Metal Post)		640 if	10					6,400		6,400
	Signage (100ft spacing)		7 ea	100	0.5	4	150	525	700		1,225
	Site TSF10										
	Fencing (3-Strand Metal Post)		460 If	10					4,600		4,600
	Signage (100ft spacing)		5 ea	100	0.5	3	150	375	500		87:
	Site TSF28 (Fencing Not Required)										
	Signage (100ft spacing)		4 ea	100	0.5	2	150	300	400		700
	Site TSF29										
	Fencing (3-Strand Metal Post)		640 If	10	· · · · · · · · · · · · · · · · · · ·				6,400		6,400
	Signage (100ft spacing)		7 ea	100	0.5	4	150	525	700		1,22
	Site WRRTF-05 (Fencing Not Required)										1,22
	Mobilization to Site		1 crew		2	2	150	300			300
	Signage (100ft spacing)		7 ев	100	0,5	4	150	525	700		1,225
	Total Subcontractor Directs										53,350
	Subcontractor Overhead and Profit @ 30%										16,005
	Total Subcontractor Directs and Indirects							~			69,355
	Procurement Fees and G&A at Current Business Practices										24,968
	Total Subcontractor Costs										94,323
	Project/Construction Management										20,807

Lockheed Martin Idaho Technologies Co.

LUCATION	14101 1111	100110	1 emiliorodies	-
Page	6 of	7		

Project

WAG-1 OU 1-10 IC Sites DRAFT ROD COST ESTIMATE

INSTITUTIONAL CONTROL (IC) SITES

TAN - INEEL

Type of Est. PLANNING . File No. 6950-5 Date 08/26/99

ACCT.	DESCRIPTION	E,V,	MAT'L	MAT'L UT.	UNIT LAB.	TOTAL	LABOR	LABOR	MATL	OTHER	TOTAL
NO.		P,H	UNIT	COST	HRS	LAB. HRS.	RATE	cost	COST	COST	COST
	Remedial Action - Operations (100 Year Duration)										
	Program Management										
	Coordination/Oversight of Technical Support		0.25 fte		200	50	75	3,750			3,750
	Coordination with Agency Participants		0.25 fte		. 80	20	75	1,500			1,500
	Cost and Schedule Control		0.25 fte		59	15	65	962			962
	Ensure Compliance of Gov't Regulation		0.25 fte		32	8	70	560			560
	Reviews		0.25 fte		. 32	8	65	520			520
	Audit Preparation and Coordination		0.25 fte		32	8	65	520			520
	Annual Operations and Maintenance Reports		0.25 fte		40	10	65	650			650
	Total Cost (Per Year)					119					8,460
	Program Management Costs - 100 Year Duration		100 yrs	8,460					846,000		846,000
										 -	
						<u> </u>					
	RA 5 Yr. Review - (Cost Per Each, (1) FTE in (5) Yr. Incr	ements)					<u>-</u>				
	RA Report Preparation	1	20 ea		80	1,600	75	120,000			120,000
	Reviews and Comment Resolution		20 ea		40	800	75	60,000			60,000
	WAG-Wide RA 5 Yr. Reviews For 100 Years							,		 -	180,000
										 -	100,000
			· · · · · · · · · · · · · · · · · · ·								
	Remediał Design										
	Added Institutional Controls - 5 Yr. Review of Deed Restric	tions with Go	vernina Bodies	and Public Com	ment Over a '	100 Year Parlo	d: Total of 19	Pavlaure		I1_	
	Legal Attorney and Env. Affairs at \$32K ea.			1				1107/01/03	··		NA NA
	Total Added Institutional Controls - 100 Year Duration										NA NA
											NA
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~					·, <del></del>	- · · -				<del>  </del>	
										<del>  -</del>	
				-		<del>                                     </del>				<del>  -</del>	
		<del>- i - i</del>		-t							

Lockheed Martin Idaho Technologies Co.

Page	7 of	7	

	221
T I U	

WAG-1 OU 1-10 IC Sites DRAFT ROD COST ESTIMATE						
INSTITUTIONAL CONTROL (IC) SITES	Type of Est.	PLANNING	File No.	6950-5	Date	08/26/99
TAN - INEEL	,	<del></del>			-	-

ACCT.	DESCRIPTION	E,V,	MAT'L	MAT'L UT.	UNIT LAB.	TOTAL	LABOR	LABOR	MAT'L	OTHER	TOTAL
NO.		P,H	UNIT	COST	HRS	LAB. HRS.	RATE	COST	COST	COST	COST
	Caretaker/Maintenance										
	Caretaker - (2 Trips Per Year)		0.0125 fte		1,880	20	75	1,500			1,500
	Fencing and Signage Maintenance		4060 If	0.5					2,030		2,030
	Area/Access Materials and Repair		1 yr	1,000					1,000		1,000
	Caretaker/Maintenance Cost Per Year	ļ									4,530
	Caretaker Cost - 100 Year Duration	ļ	100 yrs	4,530					453,000		453,000
		ļ									
		ļ		<u> </u>							
		<u> </u>	·					i			·····
		┼—									
	Operations, Maintenance, Materials and Disposal	<b>_</b>									NA
		-	··		ļ <u>.</u>						
				<u> </u>	ļ			· · ·		<u> </u> -	
		┼—									
				<del> </del>	<u> </u>						
	D&D of Facilities			- <del> </del>	<u></u>						NA
·-···		<del> </del>									
		+				<u> </u>					<del></del>
				<del> </del>	<del> </del>						
	Supralliance and Manifedor Compiler and Applicate Otto	1			<u> </u>	L					
	Surveillance and Monitoring - Sampling and Analysis for Sites:	1SF-28	& WRRTF-Da Init	iai Sampling O		erm Sampling	Required.				NA NA
		┼──			· ·						
		┪──								-	
					<u> </u>						
-		+-		<del>                                     </del>			· · · · - · · · · · · · · · · · · · · ·	· · ·			
		+.			<del></del>	<del> </del>					
		+		<del></del>							